

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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1 of 7

Complete if Known	
Application Number	09/009,294
Filing Date	01/20/1998
First Named Inventor	Mills
Group Art Unit	1754
Examiner Name	Kalafut
Attorney Docket Number	

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
OK	57	R. L. Mills, P. Ray, "Spectroscopic Characterization of Stationary Inverted Lyman Populations and Free-Free and Bound-Free Emission of Lower-Energy State Hydride Ion Formed by a Catalytic Reaction of Atomic Hydrogen and Certain Group I Catalysts, Quantitative Spectroscopy and Radiative Transfer, No. 39, sciedirect.com, April 17, (2003). Attachment 57	
OK	56	R. M. Mayo, R. Mills, "Direct Plasmadynamic Conversion of Plasma Thermal Power to Electricity for Microdistributed Power Applications," 40th Annual Power Sources Conference, Cherry Hill, NJ, June 10-13, (2002), pp. 1-4. (Web Publication Date: March 28, 2002.) Attachment 56	
OK	55	R. Mills, P. Ray, R. M. Mayo, "Chemically-Generated Stationary Inverted Lyman Population for a CW HI Laser," European J of Phys. D, submitted. (Web Publication Date: April 22, 2002.) Attachment 55	
OK	54	R. L. Mills, P. Ray, "Stationary Inverted Lyman Population Formed from Incandescently Heated Hydrogen Gas with Certain Catalysts," J. Phys. D, Applied Physics, Vol. 36, (2003), pp. 1504-1509. (Web Publication Date: March 20, 2002.) Attachment 54	
SK	53	R. Mills, "A Maxwellian Approach to Quantum Mechanics Explains the Nature of Free Electrons in Superfluid Helium," Physics of Fluids, submitted. (Web Publication Date: June 4, 2002.) Attachment 53	
OK	52	R. Mills and M. Nansteel, P. Ray, "Bright Hydrogen-Light Source due to a Resonant Energy Transfer with Strontium and Argon Ions," New Journal of Physics, Vol. 4, (2002), pp. 70.1-70.28. (Web Publication Date: October, 2002, when it became available on the New Journal of Physics website.) Attachment 52	
OK	51	R. Mills, P. Ray, R. M. Mayo, "CW HI Laser Based on a Stationary Inverted Lyman Population Formed from Incandescently Heated Hydrogen Gas with Certain Group I Catalysts," IEEE Transactions on Plasma Science, Vol. 31, No. 2, (2003), pp. 236-247. (Web Publication Date: Feb. 4, 2002.) Attachment 51	
OK	50	R. L. Mills, P. Ray, J. Dong, M. Nansteel, B. Dhandapani, J. He, "Spectral Emission of Fractional-Principal-Quantum-Energy-Level Atomic and Molecular Hydrogen," Vibrational Spectroscopy, Vol. 31, No. 2, (2003), pp. 195-213. Attachment 50	

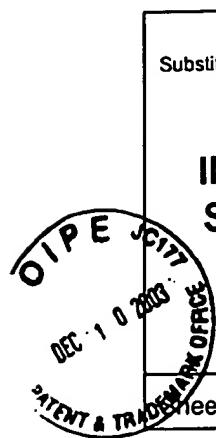
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Date Considered

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¹Unique citation designation number: 10431208-1. English language translation is attached.



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OK	65	R. Mills, P. Ray, R. M. Mayo, "Spectroscopic Evidence for CW H I Lasing in a Water-Plasma," J. of Applied Physics, submitted. (Web Publication Date: Sept. 18, 2002.) Attachment 65	
OK	64	R. L. Mills, J. Sankar, A. Voigt, J. He, B. Dhandapani, "Low Power MPCVD of Diamond Films on Silicon Substrates," Journal of Vacuum Science & Technology A, submitted. (Web Publication Date: June 26, 2002.) Attachment 64	
OK	63	R. L. Mills, X. Chen, P. Ray, J. He, B. Dhandapani, "Plasma Power Source Based on a Catalytic Reaction of Atomic Hydrogen Measured by Water Bath Calorimetry," Thermochimica Acta, Vol. 406, Issue 1–2, (2003), pp. 35–53. (Web Publication Date: June 25, 2002.) Attachment 63	
OK	62	R. L. Mills, A. Voigt, B. Dhandapani, J. He, "Synthesis and Spectroscopic Identification of Lithium Chloro Hydride," Materials Characterization, submitted. Attachment 62	
OK	61	R. L. Mills, B. Dhandapani, J. He, "Highly Stable Amorphous Silicon Hydride," Solar Energy Materials & Solar Cells, Vol. 80, No. 1, pp. 1-20. (Web Publication Date: April 15, 2002.) Attachment 61	
OK	60	R. L. Mills, J. Sankar, A. Voigt, J. He, B. Dhandapani, "Synthesis of HDLC Films from Solid Carbon," Journal of Material Science, submitted. (Web Publication Date: May 3, 2002.) Attachment 60	
OK	59	R. Mills, P. Ray, R. M. Mayo, "The Potential for a Hydrogen Water-Plasma Laser," Applied Physics Letters, Vol. 82, No. 11, (2003), pp. 1679–1681. (Web Publication Date: July 11, 2002.) Attachment 59	
OK	58	R. L. Mills, "Classical Quantum Mechanics," Physics Essays, submitted. (Web Publication Date: May 23, 2002.) Attachment 58	

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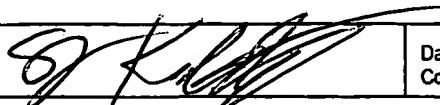
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OK	73	R. L. Mills, P. Ray, B. Dhandapani, J. He, "Energetic Helium-Hydrogen Plasma Reaction," AIAA Journal, submitted. (<i>Web Publication Date: July 26, 2002.</i>) Attachment 73	
OK	72	R. L. Mills, M. Nansteel, P. C. Ray, "Bright Hydrogen-Light and Power Source due to a Resonant Energy Transfer with Strontium and Argon Ions," Vacuum, submitted. Attachment 72	
OK	71	R. L. Mills, P. Ray, B. Dhandapani, J. Dong, X. Chen, "Power Source Based on Helium-Plasma Catalysis of Atomic Hydrogen to Fractional Rydberg States," Contributions to Plasma Physics, submitted. Attachment 71	
OK	70	R. Mills, J. He, A. Echezuria, B. Dhandapani, P. Ray, "Comparison of Catalysts and Plasma Sources of Vibrational Spectral Emission of Fractional-Rydberg-State Hydrogen Molecular Ion," European Journal of Physics D, submitted. (<i>Web Publication Date: Sept. 2, 2002.</i>) Attachment 70	
OK	69	R. L. Mills, J. Sankar, A. Voigt, J. He, B. Dhandapani, "Spectroscopic Characterization of the Atomic Hydrogen Energies and Densities and Carbon Species During Helium-Hydrogen-Methane Plasma CVD Synthesis of Diamond Films," Chemistry of Materials, Vol. 15, (2003), pp. 1313–1321. (<i>Web Publication Date: Dec. 31, 2002.</i>) Attachment 69	
OK	68	R. Mills, P. Ray, R. M. Mayo, "Stationary Inverted Balmer and Lyman Populations for a CW HI Water-Plasma Laser," IEEE Transactions on Plasma Science, submitted. (<i>Web Publication Date: Aug. 16, 2002.</i>) Attachment 68	
OK	67	R. L. Mills, P. Ray, B. Dhandapani, J. He, "Extreme Ultraviolet Spectroscopy of Helium-Hydrogen Plasma," J. Phys. D, Vol. 36, (2003), pp. 1535–1542. (<i>Web Publication Date: July 17, 2002.</i>) Attachment 67	
OK	66	R. L. Mills, P. Ray, "Spectroscopic Evidence for a Water-Plasma Laser," Europhysics Letters, submitted. (<i>Web Publication Date: Sept. 19, 2002.</i>) Attachment 66	

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OK	81	R. Mills, P. Ray, B. Dhandapani, W. Good, P. Jansson, M. Nansteel, J. He, A. Voigt, "Spectroscopic and NMR Identification of Novel Hydride Ions in Fractional Quantum Energy States Formed by an Exothermic Reaction of Atomic Hydrogen with Certain Catalysts," European Physical Journal: Applied Physics, submitted. (Web Publication Date: Feb. 21, 2003.) Attachment 81	
OK	80	R. L. Mills, "The Fallacy of Feynman's Argument on the Stability of the Hydrogen Atom According to Quantum Mechanics," Foundations of Phys., submitted. (Web Publication Date: Jan. 27, 2003.) Attachment 80	
OK	79	R. Mills, J. He, B. Dhandapani, P. Ray, "Comparison of Catalysts and Microwave Plasma Sources of Vibrational Spectral Emission of Fractional-Rydberg-State Hydrogen Molecular Ion," Canadian Journal of Physics, submitted. Attachment 79	
OK	78	R. L. Mills, P. Ray, J. Dong, M. Nansteel, B. Dhandapani, J. He, "Vibrational Spectral Emission of Fractional-Principal-Quantum-Energy-Level Molecular Hydrogen," Bulletin of the Chemical Society of Japan, submitted. (Web Publication Date: Sept. 9, 2002.) Attachment 78	
OK	77	J. Phillips, R. L. Mills, X. Chen, "Water Bath Calorimetric Study of Excess Heat in 'Resonance Transfer' Plasmas," Journal of Applied Physics, submitted. (Web Publication Date: June 16, 2003.) Attachment 77	
OK	76	R. L. Mills, P. Ray, B. Dhandapani, X. Chen, "Comparison of Catalysts and Microwave Plasma Sources of Spectral Emission of Fractional-Principal-Quantum-Energy-Level Atomic and Molecular Hydrogen," Journal of Applied Spectroscopy, submitted. (Web Publication Date: Feb. 12, 2002.) Attachment 76	
OK	75	R. L. Mills, P. Ray, B. Dhandapani, J. He, "Novel Liquid-Nitrogen-Condensable Molecular Hydrogen Gas," Acta Physica Polonica A, submitted. (Web Publication Date: Oct. 29, 2002.) Attachment 75	
OK	74	R. L. Mills, P. C. Ray, R. M. Mayo, M. Nansteel, B. Dhandapani, J. Phillips, "Spectroscopic Study of Unique Line Broadening and Inversion in Low Pressure Microwave Generated Water Plasmas," Physics of Plasmas, submitted. (Web Publication Date: June 18, 2003.) Attachment 74	

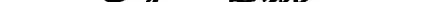
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				Examiner Name	Kalafut
Serial No.	5	of	7	Attorney Docket Number	

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<i>JK</i>	89	R. Mills, P. C. Ray, R. M. Mayo, M. Nansteel, W. Good, P. Jansson, B. Dhandapani, J. He, "Hydrogen Plasmas Generated Using Certain Group I Catalysts Show Stationary Inverted Lyman Populations and Free-Free and Bound-Free Emission of Lower-Energy State Hydride," Technical Physics, submitted. Attachment 89	
	88	R. Mills, J. Sankar, A. Voigt, J. He, P. Ray, B. Dhandapani, "Role of Atomic Hydrogen Density and Energy in Low Power CVD Synthesis of Diamond Films," JACS, in preparation. Attachment 88	
<i>JK</i>	87	R. Mills, B. Dhandapani, M. Nansteel, J. He, P. Ray, "Liquid-Nitrogen-Condensable Molecular Hydrogen Gas Isolated from a Catalytic Plasma Reaction," J. Phys. Chem. B, submitted. Attachment 87	
<i>JK</i>	86	R. L. Mills, P. Ray, J. He, B. Dhandapani, M. Nansteel, "Novel Spectral Series from Helium-Hydrogen Evenson Microwave Cavity Plasmas that Matched Fractional-Principal-Quantum-Energy-Level Atomic and Molecular Hydrogen," European Journal of Physics, submitted. (Web Publication Date: April 24, 2003.) Attachment 86	
<i>JK</i>	85	R. L. Mills, P. Ray, R. M. Mayo, "Highly Pumped Inverted Balmer and Lyman Populations," New Journal of Physics, submitted. Attachment 85	
<i>JK</i>	84	R. L. Mills, P. Ray, J. Dong, M. Nansteel, R. M. Mayo, B. Dhandapani, X. Chen, "Comparison of Balmer α Line Broadening and Power Balances of Helium-Hydrogen Plasma Sources," Plasma Sources Science and Technology, submitted. (Web Publication Date: March 12, 2003.) Attachment 84	
	83	R. Mills, P. Ray, M. Nansteel, R. M. Mayo, "Comparison of Water-Plasma Sources of Stationary Inverted Balmer and Lyman Populations for a CW Ti:Li Laser," J. Appl. Spectroscopy, in preparation. Attachment 83-	
<i>JK</i>	82	R. Mills, J. Sankar, P. Ray, J. He, A. Voigt, B. Dhandapani, "Synthesis and Characterization of Diamond Films from MPCVD of an Energetic Argon-Hydrogen Plasma and Methane," J. of Materials Research, submitted. (Web Publication Date: May 7, 2003.) Attachment 82	

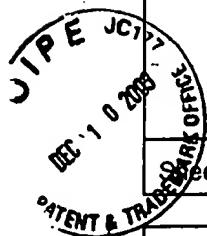
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	97	R. L. Mills, P. Ray, B. Dhandapani, "Evidence of an Energy Transfer Reaction Between Atomic Hydrogen and Argon II or Helium II as the Source of Excessively Hot H Atoms in RF Plasmas," Contributions to Plasma Physics, submitted. (Web Publication Date: Sept. 26, 2003.) Attachment 97	
	96	J. Phillips, C.K. Chen, R. L. Mills, "Evidence of the Production of Hot Hydrogen Atoms in RF Plasmas by Catalytic Reactions Between Hydrogen and Oxygen Species," J. Phys. D., submitted. (Web Publication Date: Sept. 12, 2003.) Attachment 96	
	95	R. L. Mills, P. Ray, B. Dhandapani, "Excessive Balmer-Line Broadening of Water-Vapor Capacitively-Coupled RF Discharge Plasmas" IEEE Transactions on Plasma Science, submitted. (Web Publication Date: Aug. 18, 2003.) Attachment 95	
	94	R. L. Mills, "The Nature of the Chemical Bond Revisited and an Alternative Maxwellian Approach," Il Nuevo Cimento, submitted. (Web Publication Date: Aug. 6, 2003.) Attachment 94	
	93	R. L. Mills, P. Ray, M. Nansteel, J. He, X. Chen, A. Voigt, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction Forms a New State of Hydrogen," In preparation. Attachment 93	
	92	R. L. Mills, P. Ray, M. Nansteel, J. He, X. Chen, A. Voigt, B. Dhandapani, Luca Gamberale, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," European Physical Journal D, submitted. (Web Publication Date: June 6, 2003.) Attachment 92	
	91	R. Mills, P. Ray, "New H I Laser Medium Based on Novel Energetic Plasma of Atomic Hydrogen and Certain Group I Catalysts," J. Plasma Physics, submitted. Attachment 91	
	90	R. L. Mills, P. Ray, M. Nansteel, J. He, X. Chen, A. Voigt, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Am. Chem. Soc. Div. Fuel Chem. Prepr., Vol. 48, No. 2, (2003). Attachment 90	

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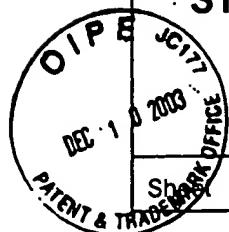
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	98	R. L. Mills, Y. Lu, J. He, M. Nansteel, P. Ray, X. Chen, A. Voigt, B. Dhandapani, "Spectral Identification of New States of Hydrogen," J. Phys. Chem. B, submitted. (Web Publication Date: Nov. 18, 2003.) Attachment 98	
	99	R. L. Mills, Y. Lu, B. Dhandapani, "Spectral Identification of H ₂ (1/2)," submitted. Attachment 99	
	100	R. Mills, B. Dhandapani, J. He, "Highly Stable Amorphous Silicon Hydride from a Helium Plasma Reaction," Chemistry of Materials, submitted. (Web Publication Date: Nov. 17, 2003.) Attachment 100	

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